RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE: February 1999

BUDGET ACTIVITY: 6 - Management and Support

PE NUMBER AND TITLE: 0603402F Space Test Program (Space)

PROJECT: 2617

COST *($ In Thousands)*	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
2617 Free-Flyer Spacecraft Missions	35,918	0	0	0	0	0	0	0	0	0
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

Note: Space Test Program (Space) funding is in PE 0605864F starting in FY99.

(U) A. Mission Description

(U) The Space Test Program (STP) conducts space test missions to fly the maximum number of DoD experiments consistent with priority, opportunity, and funding. STP supports the DoD space research community by centrally financing acquisition of a host satellite or launch vehicle, the launch, and initial operations costs for experiments with military relevance whose scope ranges from basic research to advanced development. STP missions are the most cost effective way to flight test new space systems technologies, concepts and designs, providing an inexpensive way to:

- Demonstrate the feasibility of new space systems and technologies
- Improve operational design by characterizing the space environment, event, or sensor physics proposed for an operational system/system upgrade
- Provide early operational capabilities to evaluate usefulness or quickly react to new developments
- Perform operational risk reduction through direct flight test of prototype components
- Develop the knowledge base from which to plan new and improved operational systems and system upgrades
- Develop and test advanced small launch vehicle technology and capabilities.

(U) This DoD program provides the primary spaceflight capability to perform fly-before-buy, risk-reducing demonstrations of advanced technologies in operational space environments. The Secretary of Defense issued a policy statement in November 1995 reaffirming STP's role as the primary provider of spaceflight for the entire DoD space research community. The Air Force requires a stable funding level and the flexibility necessary to take advantage of whatever means of spaceflight is deemed to be most cost-effective for a given experiment or complement of experiments. This flexibility is essential to take advantage of inexpensive "target of opportunity" space hardware, including operational spacecraft, where margin is usually firmly identified during the later stages of spacecraft development. This assures the greatest amount of DoD space research is accomplished with the limited funds available. This funding provides DoD's most successful and cost-effective capability to launch and test new technologies prior to their incorporation into our nation's very expensive and demanding operational space systems. Insufficient funding would force each of the Services and DoD agencies to create individual launch capabilities in an attempt to duplicate STP's current low-cost, risk-mitigating capability. Such a redundancy would result in the loss of the contractual economy of scale that a single space test organization provides, as well as the filtering function of the DoD Space Experiments Review Board in assuring quality experiments and minimum duplication.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
BUDGET ACTIVITY: 6 - Management and Support	PE NUMBER AND TITLE: 0603402F Space Test Program (Space) / PROJECT: 2617

(U) FY 1998 ($ in Thousands):

–	(U) $ 7,454	Piggyback/secondary payload missions, mission planning, Aerospace Corp support, mission and program support
–	(U) $23,724	Complete Advanced Research and Global Observation Satellite (ARGOS); ARGOS launch/operations support; continue Multispectral Thermal Imager (MTI) Taurus launch vehicle procurement, TSX-5, STEP-Mission 4
–	(U) $ 3,105	Space Shuttle payload engineering, analysis, pre- and post-launch processing, and launch support
–	(U) $ 1,635	Initiate reusable upper stage/bus development activities for spaceflight of Space Experiments Review Board approved experiments
–	(U) $35,918	Total

(U) FY 1999 ($ in Thousands):

–	(U) $ 0	Funding is in PE 0605864F

(U) FY 2000 ($ in Thousands):

–	(U) $ 0	Funding is in PE 0605864F

(U) FY 2001 ($ in Thousands):

–	(U) $ 0	Funding is in PE 0605864F

(U) B. Budget Activity Justification: STP is in Budget Activity 6 RDT&E Management and Support because it supports RDT&E satellite launches.

(U) C. Program Change Summary ($ in Thousands)

	FY 1998	FY 1999	FY 2000	FY 2001	Total Cost
(U) Previous President's Budget (FY1999 PB)	38,696				
(U) Appropriated Value	42,241				
(U) Adjustments to Appropriated Value					
a. Cong Gen Reductions	-2,556				
b. SBIR	-989				
c. Omnibus or Other Above Threshold Reprogram	-763				
d. Below Threshold Reprogramming	-2,015				
e. Rescission					
(U) Adjustments to Budget Years Since FY1999 PB					
(U) Current Budget Submit/FY2000 PB	35,918				

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
BUDGET ACTIVITY 6 - Management and Support	PE NUMBER AND TITLE 0603402F Space Test Program (Space)
	PROJECT 2617

(U) Significant Program Changes:
(U) STP funding is in PE 0605864F starting in FY99.
(U) Below threshold reprogramming for higher Air Force priorities caused six month delay in STP flight test support for upper stage/bus demonstration vehicle.

(U) D. Other Program Funding Summary ($ in Thousands): Not Applicable

Related RDT&E:
(U) PE 0305119F, Medium Launch Vehicles
(U) PE 0305144F, Titan Space Boosters
(U) PE 0305953F, Evolved Expendable Launch Vehicle
(U) PE 0605864F, STP funding for FY99 and beyond

(U) Experiments are funded by many Science and Technology (S&T) PEs in Air Force, Army, Navy, Defense Advanced Research Projects Agency (DARPA), Ballistic Missile Defense Organization (BMDO), Department of Energy (DoE), National Aeronautics and Space Administration (NASA), and other programs.

(U) E. Acquisition Strategy
(U) Various service laboratories and DoD agencies justify, develop, finance, and deliver the space research experiments supported by STP. These experiments have a common goal to improve DoD's current and future operational space systems' performance. The DoD Space Experiments Review Board (SERB), an independent board composed of Air Force, Army, Navy, NRO, BMDO, and other representatives, annually prioritizes experiments for spaceflight. The Board gives the prioritized list of experiments to STP, who then seeks out the most cost-effective means of spaceflight to maximize the number of experiments flown within the constraints of priority, opportunity and available funding. The most common spaceflight opportunities include piggybacking on military or commercial satellites and using the various payload modes of the Space Shuttle and International Space Station. For experiments with requirements that cannot be satisfied with these "secondary" opportunities, STP procures dedicated spacecraft and launch vehicle hardware within the constraints of available funding and according to experiment requirements. These include small and medium launch vehicle-class satellites, as well as small launch vehicle-class boosters (such as Pegasus XL, Taurus, and Athena). Medium launch vehicle-class boosters from PE 35119F, PE 35144F, and PE 35953F provide medium launch as required. If a service fails to adequately fund a particular experiment, if STP deems the experiment impractical to fly, or if the appropriate spaceflight opportunity becomes unavailable, STP shifts remaining resources to provide spaceflight support for the next highest priority experiment.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
BUDGET ACTIVITY 6 - Management and Support	PE NUMBER AND TITLE 0603402F Space Test Program (Space)
	PROJECT 2617

(U) F. Schedule Profile These are actual FY98 launch dates.

	FY 1998				FY 1999				FY 2000				FY 2001			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(U) STEP4-EMPE, OOAM, DIDM (P95-1)	*															
(U) STS-87 MSX, SIMPLEX	*															
(U) POAM III (SPOT IV) (S96-2)		*														
(U) STS-89 CREAM, MSX, SIMPLEX		*														
(U) STS-91 CREAM, MSX, SIMPLEX			*													

* = completed event